DVR Management Information

Contents

1. Foreword

Management information is the data interface of network equipment for SNMP protocol. SNMP achieve to provide the management information, the management station get the information according to definition of management information, complete SNMP data access.

The management information includes the name, the mark, the type, the authority, the state, the description and so on important attribute.

In addition to support the management of network layer information, but also need to provide special information related to DVR devices. This MIB is according to the main performance and parameters of Intelbras DVR.

Manage information classified as read - only, write and read and write three types. Reading is the general type of information for reading. Writing is used for the configuration or setting. Reading and writing is a combination of both. Considering that Intelbras DVR management UI function is very rich, and some set operation is very complicated, and has no relationship with the network, not suitable for set by SNMP, also, some of the settings need to reboot the device, relates to the relatively wide, so in the management information base (MIB), only to have the network settings for optional design.

The design of management information helps users browse the DVR device information and simple configuration interface by SNMP. The complex operation is performed by managing DVR UI

This article is discussed and certified, will be used to guide the preparation of MIB and agent development.

DVR MIB can be upgraded by new version. The current design is the first version. In view of the current and second version of DVR, the DVR is upgraded in future and there is new information, can design the next version of management information. Therefore, the information management is mainly to cover all the information of current DVR, and have a certain capacity expansion.

2. DVR MIB

2.1 System information

Name	Data	R/W	Description
os	DisplayString		DVR use operation system
processor	DisplayString		DVR CPU model
dsp	DisplayString		DSP chipset model
ram	INTEGER		DVR dynamic memory capacity

Model	DisplayString		DVR model

2.2 Device data

Name	Data	R/W	Description
currentTime	DisplayString		The current local time
biosVersion	DisplayString		BIOS version
videoChannel	INTEGER(1..65)		Video channel quanity
audioChannel	INTEGER(1..65)		Audio channel quantity
alarmInput	INTEGER(1..65)		Alarm in channel quantity
alarmOutput	INTEGER(1..65)		Alarm out channel quantity
ideInterface	INTEGER(1..16)		IDE connector quantity
networkInterface	INTEGER(0..16)		Internet connector quantity
usbInterface	INTEGER(0..4)		USB connector quantity
comInterface	INTEGER(0...4)		Serial number
parallelInterface	INTEGER(0..4)		Parallel port number
softwareRevision	DisplayString		Software version
softwareReleaseDate	DisplayString		Software release time
webRevision	DisplayString		Web software version
Talk	INTEGER		Support talk function. 1, Support. 2, Not support.

2.3 Video status

Name	Data status	R/W	Description
sendPacket	INTEGER		All package sent
failedPacket	INTEGER		All failed package

2.3.1 videoChannelInfoTable

Name	Data status	R/W	Description
Id	INTEGER		Channel ID
Name	DisplayString		Channel name
Status	INTEGER		1 normal; 2 connected; 3 missing connection; 4 recording; 5 locked; 6 wrong.
Pixel	INTEGER		Resolution, 0 D1, 1 CIF, 2 Bcif, 3 cif, 4, qcif 5,vga, 6 qvga, 7 svcd 8 nr
Rate	INTEGER		Bit rate
Modal	INTEGER		Record model: 1 manual, 2 Move detection, 3 Normal, 4 alarm

2.3.2 audioChannelInfoTable

Name	Data status	R/W	Description
Id	INTEGER		Channel ID
Status	INTEGER		1 normal; 2 connected; 3 missing connection; 4 recording; 5 locked; 6 wrong.

2.4 Alarm status

Name	Data status	R/W	Description
inTunnel	INTEGER		Alarm input number
outTunnel	INTEGER		Alarm output number
receiveNumber	INTEGER		Alarm quantity received
sendNumber	INTEGER		Alarm quantity sent out

2.4.1 inTunnelInfoTable

Name	Data status	R/W	Description
Id	INTEGER		ID
Status	INTEGER		1 normal; 2 alarm; 3 failed; 4 not connected
Number	INTEGER		Alarm quantity received
Modal	INTEGER		Alarm model: 1 move detection, 2 missing, 3 normal, 4 exchange, 5 others

2.4.2 outTunnelInfoTable

Name	Data status	R/W	Description
Id	INTEGER		ID
Status	INTEGER		1 normal; 2 alarm; 3 failed; 4 not connected
Number	INTEGER		Alarm quantity sent out
Modal	INTEGER		Alarm model: 1 move detection, 2 missing, 3 normal, 4 exchange, 5 otherss

2.5 Storage device

Name	Data status	R/W	Description
diskNum	INTEGER		HDD quantity
totalSize	INTEGER		Unit of capacity is M
remainSize	INTEGER		Residual capacity

timeRecorded	INTEGER		Current recording time, unit is second.

2.5.1 diskInfoTable

Name	Data status	R/W	Description
Id	INTEGER		HDD ID
Type	INTEGER		HDD model
Capacity	INTEGER		HDD capacity, unit is M
Status	INTEGER		Status: 1 Normal; 2 unavailable; 3 full; 4 locked; 5 others
Remain	INTEGER		Residual capacity, unit is M.
Recorded	INTEGER		Recording time

2.6 User information

Name	Data status	R/W	Description
userNum	INTEGER		Totality user

2.6.1 userInfoTable

Name	Data status	R/W	Description
Id	INTEGER		ID
Name	DisplayString		User name
Status	INTEGER		1 online；2 off line；3 locked
Ip	IpAddress		Ip address when user is on line

2.7 Network information

Name	Data status	R/W	Description
Ip	IPADDRESS	*	Network IP
Mask	DisplayString	*	Subnet mask
Gateway	IPADDRESS	*	Gateway
Port	INTEGER	*	Server port
httpPort	INTEGER	*	HTTP server port
supportProtocol	INTEGER	*	Supportprotocol 0000 0001 : Intelbras 0000 0010 : CNM1 0000 0100 : CNM2 0000 1000 : CNM3
maxConnection	INTEGER	*	Max connection
currentConnection	INTEGER	*	Current connection quantity
Action	INTEGER	*	Restart device to enable network. 1 restart; 2 turn off

2.7.1 ddnsInfo

Name	Data status	R/W	Description
Hostname	DisplayString	*	Host name
Ip	IpAddress	*	DDNS address
Port	INTEGER	*	DDNS port
Status	INTEGER	*	1 enable; 2 not enable

2.7.2 pppoeInfo

Name	Data status	R/W	Description
Status	INTEGER	*	1 enable；2 not enable
Username	DisplayString	*	Current user name
Password	DisplayString	*	Password, write and can’t read.

2.7.3 alarmServerInfo

Name	Data status	R/W	Description
Name	DisplayString	*	Server name
Ip	IPADDRESS	*	Alarm server address
Port	INTEGER	*	Alarm server port
Protocol	INTEGER	*	Protocol: 1UDP，2TCP，3 others
Status	INTEGER		Status: 1 enable, 2 not enable

2.7.4 ntpServerInfo

Name	Data status	R/W	Description
Ip	IPADDRESS	*	NTP server address
Enable	INTEGER	*	Enable or not: 1 enable, 2 disabled
Port	INTEGER	*	Client port port
TimeZone	INTEGER	*	GMT
Interval	INTEGER	*	Sync interval time, unit is hour.

2.7.5 mgrCenterInfo

Name	Data status	R/W	Description
cmsIp	IPADDRESS	*	Manage(input)server IP
cmsPort	INTEGER	*	Port Manage(input) server
cmsProtocol	INTEGER	*	Protocol. 1, Intelbras protocol, 2 mutual agreement 3 others

cmsStatus	INTEGER		Status: 1 enable, 2 not enable

2.7.6 dmServerInfo

Name	Data status	R/W	Description
dmIp	IPADDRESS	*	DM server IP
dmPort	INTEGER	*	DM server Port
dmProtocol	INTEGER	*	Protocol. 1, Intelbras protocol, 2 mutual agreement 3 others
dmStatus	INTEGER		Status: 1 enable, 2 not enable

2.8 Trap

DVR needs to send alarm to NMS when something important happened. Set the trap according to DVR feature.

2.8.1 trapInfo

Name	Data status	R/W	Description

2.8.2 dvrEvent

2.8.2.1 hardDiskEvent

Send out when HDD status is changed. HDD is full, HDD error, HDD reparing, new HDD. To write off the old event.

Variable：

Variable	Description
deviceIP	Owner of HDD, DVR IP
deviceType	DVR model
Id	HDD ID in DVR
Status	HDD status
currentTime	Event send time

Mark: ID and status from diskInfoTable。

2.8.2.2 alarmServerEvent

Event is sent out when alarmServer status is changed. Event should be sent out when

alarmServer is enable or disable.

Variable：

Variable	Description
deviceIP	DVR IP
deviceType	DVR model
Name	alarmServer name
Ip	alarmServer address
Port	alarmServer port
Protocol	alarmServer protocol
Status	alarmServer status
currentTime	Event send time

2.8.2.3 cmsServerEvent

Event is sent out when cms is changed.

Variable：

Variable	Description
deviceIP	DVR IP
deviceType	DVR model
Ip	cmsServer address
Port	cmsServer port
Protocol	cmsServer protocol
Status	cmsServer status
currentTime	Event send time

2.8.2.4 maxConnectionMajorEvent

Event is sent out when network is misconnection.

Variable：

Variable	Description
deviceIP	DVR IP
deviceType	DVR model
Status	alarmServer status
maxConnection	Max connection
currentTime	Trap send time

2.8.2.5 maxConnectionNormalEvent

Event is sent out when network is normal.

Variable：

Variable	Description
deviceIP	DVR IP
deviceType	DVR model
Status	alarmServer status
maxConnection	Max connection
currentTime	Trap send time

2.8.2.6 videoTunnelEvent

Event is sent out when video channel status is changed.

Variable：

Variable	Description
deviceIP	DVR IP
deviceType	DVR model
Id	Channel number
Name	Name
Status	Channel status
Modal	Model
currentTime	Trap send time

2.8.2.7 audioTunnelEvent

Event is sent out when audio channel status is changed.

Variable：

Variable	Description
deviceIP	DVR IP
deviceType	DVR model
Id	Channel number
Status	Channel status
currentTime	Trap send time

2.8.2.8 alarmInEvent

Event is sent out when alarm input channel is changed. This change is limited to alarm connection status change. That means channel is enable and disable. Alarm is not sent by trap.

Variable：

Variable	Description
deviceIP	DVR IP
deviceType	DVR model
Id	Channel number
Status	Channel status

Modal	Model
currentTime	Trap send time

2.8.2.9 alarmOutEvent

Event is sent out when alarm input channel is changed.

Variable：

Variable	**Description**
deviceIP	DVR IP
deviceType	DVR model
Id	Channel number
Status	Channel status
Modal	Model
currentTime	Trap send time

2.8.2.10 dvrStatusEvent

Event is sent out when DVR is started or turned off.

Variable：

Variable	**Description**
deviceIP	DVR IP
deviceType	DVR model
currentTime	Event time
eventType	Device status: 1. Start; 2 turn off.
currentTime	Trap send time